

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 05-159	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2005/005626	International filing date (day/month/year) 22/02/2005	(Earliest) Priority Date (day/month/year) 20/02/2004
Applicant THE BOARD OF TRUSTEES OF THE UNIVERSITY OF ...		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☒ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 1A

☐ as suggested by the applicant.

☒ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTEP TIONAL SEARCH REPORT

In tional Application No
PCT/US2005/005626

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K31/40 A61P9/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, PAJ, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>TAKAHASHI KOKI ET AL: "Enhanced activities and gene expression of phosphodiesterase types 3 and 4 in pressure-induced congestive heart failure" HEART AND VESSELS, SPRINGER, BERLIN, DE, vol. 16, no. 6, September 2002 (2002-09), pages 249-256, XP002278931 ISSN: 0910-8327 page 255, left-hand column, last paragraph - right-hand column, last paragraph; figure 2</p> <p style="text-align: center;">----- -/--</p>	1-17

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

9 June 2005

Date of mailing of the international search report

13/07/2005

Name and mailing address of the ISA

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Loher, F

INTERVENTIONAL SEARCH REPORT

In International Application No
PCT/US2005/005626

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	TSUBOI YASUSHI ET AL: "Suppression of mesangial proliferative glomerulonephritis development in rats by inhibitors of cAMP phosphodiesterase isozymes types III and IV" JOURNAL OF CLINICAL INVESTIGATION, vol. 98, no. 2, 1996, pages 262-270, XP002330144 ISSN: 0021-9738 figure 2	1-17
X	US 5 286 494 A (FECHNER ET AL) 15 February 1994 (1994-02-15) examples 1,2	14-17
X	KARPPANEN H ET AL: "Central hypotensive effects of imidazole acetic acid and rolipram (ZK 62 711) in rats" AGENTS AND ACTIONS 1979 SWITZERLAND, vol. 9, no. 1, 1979, pages 84-86, XP009048338 figure 2	1-17
P,X	JUNG A ET AL: "Evidence that phosphodiesterase 4b plays a mechanistic role in salt-adaptation and is a therapeutic target for hypertension in the dahl rat" AMERICAN JOURNAL OF HYPERTENSION, ELSEVIER, vol. 17, no. 5, May 2004 (2004-05), page S90, XP004575635 ISSN: 0895-7061 abstract	1-17

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2005/005626

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 1-17 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compounds.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inventor's International Application No
PCT/US2005/005626

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5286494	A	15-02-1994	DE 3622487 A1 14-01-1988
			AT 67087 T 15-09-1991
			AU 7643187 A 29-01-1988
			AU 7817891 A 05-09-1991
			DE 3772954 D1 17-10-1991
			WO 8800046 A1 14-01-1988
			DK 113388 A 02-03-1988
			EP 0274498 A1 20-07-1988
			FI 880839 A 23-02-1988
			JP 2569100 B2 08-01-1997
			JP 1500992 T 06-04-1989
			NO 880760 A 22-02-1988
